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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,228	03/31/2004	Charles E. Benedict	14630	3874
293 7590 04/10/2007 Ralph A. Dowell of DOWELL & DOWELL P.C. 2111 Eisenhower Ave Suite 406 Alexandria, VA 22314			EXAMINER ADAMS, GREGORY W	
			ART UNIT 3652	PAPER NUMBER

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/10/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/813,228

Applicant(s)

BENEDICT ET AL.

Examiner

Gregory W. Adams

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 18-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7, 9, 12, 18, 19 and 21-24 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 8, 10, 11, 13 and 20 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Objections

Claims 5-6, 8, 10-11, 13, 20 are objected to because of the following informalities: Claims 5-6, 8, 10-11, 13, 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

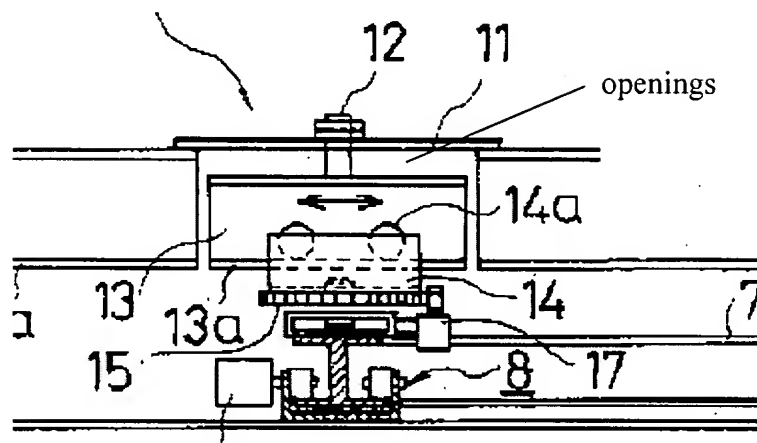
Claims 1-2, 21 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over Toda (JP 07-172317 A) in view of Nordstrom (US 4,043,285) (previously cited).

With respect to claims 1-2, 21, Toda discloses an automated material handling and storage system comprising:

- cells each cell having of a size to cooperatively receive a storage and shipping container in each tier level;
- a grid track 2-5 system mounted in spaced relationship above and having tracks 2, 4 extending transversely with respect to one another in an

intersecting pattern and defining openings (see FIG. 2 reproduced below) at each intersection thereof;

- at least one transfer unit (generally indicated by 9) moveably mounted to a grid track system 2-5 so as to be suspended therefrom and including carriage means 14a, 14b for suspending a transfer unit from a grid track system so as to be selectively moveable above all cells;
- a transfer unit including selectively engageable drive means 14b for moving a transfer unit along a grid track system so as to be moveable in a horizontal plane in both forward to back and side to side motions within the horizontal plane;
- hoist means (FIG. 16) carried by a transfer unit for raising and lowering a container;
- a guide member extending upward from between a spreader beam and cooperatively engaging at least one second guide member;
- means for providing electrical power to said drive means of said at least one transfer unit.



Toda does not disclose vertical cells, spreader beam or guide member. Nordstrom discloses:

- a structure 46, 50, 52 defining a plurality of vertical cells (FIG. 3) each cell having a plurality of tier levels and being of a size to cooperatively receive a storage and shipping container in each tier level; and
- a guide member 106 extending between a spreader beam 108 a transfer unit 82 to stabilize a spreader beam with respect to a transfer unit to thereby control movement of a storage and shipping container carried by a spreader beam when a storage and shipping container is elevated above a plurality of cells.

Nordstrom discloses a plurality of transfer units mounted to a grid, columns and tiers (indicated generally as 12, 34, 52) as is common in dense storage of containers because containers are generally accepted as capable of the stresses inherent in stacking which are more accessible to on-board gantry cranes 82 which improves a ships center of gravity. C1/L4-9. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of

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Toda to include a plurality of transfer units, columns and tiers, as per the teachings of Nordstrom, to improve the center of gravity of a loaded ship.

Claims 3-4, 9 & 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toda (JP 07-172317 A) in view of Nordstrom (US 4,043,285) (previously cited) and Davis (US 3,252,603).

With respect to claims 3-4, 9 & 22, Toda discloses drive means 14a, 14b and a track system 2, 4 that propels Toda's apparatus in a horizontal grid fashion, and does not disclose a first drive gear and rack member. Davis discloses a rack 134 engaged by a first drive gear 136, 136 and a drive motor 138, 138 such that during lifting and transfer by an overhead material handling and storage system that is simple and compact, durable and economical. C2. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the drive means of Toda to include a plurality of rack members extending along each of the tracks, first drive gears that engage first and second drive motors, as per the teachings of Davis, to simplify an overhead material handling and storage system.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toda (JP 07-172317 A) in view of Nordstrom (US 4,043,285) (previously cited) and Shiota et al. (US 6,161,887).

With respect to claim 7, Toda discloses guide members, two hoists assemblies and winding drums, and does not disclose a fixed probe and telescoping probe. Shiota et al. discloses a fixed probe 20 and telescoping probe receiver 18, 19 to suppress swing during container lifting. C2/L2. Therefore, it would have been obvious to one

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having ordinary skill in the art at the time the invention was made to modify the apparatus of Toda to include a probe and probe receiver, as per the teachings of Shiota, to suppress swing.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toda (JP 07-172317 A) in view of Nordstrom (US 4,043,285) (previously cited) and Sauerwein (US 6,220,173) (previously cited).

With respect to claim 12, Sauerwein discloses inductive power raceway (FIG. 1a) mounted adjacent tracks of a grid track system and collector shoe 20 which reduces power consumption and enables smooth passage through branches without any stopping or braking phase, low wear and decreased maintenance. C1/L45. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Toda to include inductive power raceway mounted adjacent tracks of a grid track system and collector shoe, as per the teachings of Sauerwein, to enable smooth passage through branches without any stopping or braking phase, low wear and decreased maintenance.

Claims 18-19 & 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toda (JP 07-172317 A) in view of Nordstrom (US 4,043,285) (previously cited), Shiota et al. (US 6,161,887) and Lucking (US 5,915,906).

With respect to claims 18-19 & 23, Lucking discloses guide arms 16 having two guide walls and flared outwardly at a lower portion thereof to align a grab object eliminating swing or sway. C1/L34. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of

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Toda to include guide arms 16 having two guide walls and flared outwardly at a lower portion thereof, as per the teachings of Lucking, to eliminate swing or sway.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brickner et al. (US 4,973,219) in view of Podesta (US 4,158,416).

With respect to claim 24, Brickner et al. disclose an automated material handling and storage system for storage and shipping containers comprising:

- a structure 12 defining a plurality of vertical cells each cell defining a plurality of tier levels and being of a size to cooperatively receive a storage and shipping container in each tier level,
- a grid track system 12 mounted in spaced relationship above all of said cells and having tracks extending transversely with respect to one another in an intersecting pattern,
- at least one transfer unit 14 moveably suspended from a grid track system so as to be selectively moveable above all of said plurality of cells,
- a transfer unit including a plurality of carriage means for suspending a transfer unit from a grid track system,
- a transfer unit including first drive means 54 for moving a transfer unit along a grid track system so as to be moveable in a horizontal plane in a forward to back motion and second drive means (FIG. 8) for moving in a horizontal plane in a side to side motion,

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- a spreader beam 40, hoist means 48 carried by a transfer unit for raising and lowering a spreader beam, a spreader beam being of a size to cooperatively engage a storage container within one of said cells, and
- means for providing electrical power to said at least one transfer unit.

Brickner does not disclose first and second guide members. Podesta discloses a spreader beam having a first guide member 60 extending from a spreader beam 84 engageable with second guide member 61 extending from a transfer unit 2, 85 to lock a spreader to a transfer unit 2, 85 during transfer unit movement. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Brickner to include first and second guide members, as per the teachings of Podesta, to lock a spreader beam and container during transfer unit movement.

Allowable Subject Matter

Claims 5-6, 10-11 & 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The cited prior art does not disclose a first drive gear mounted to a first movable housing that is movable between a first position wherein first drive gears is spaced from rack members to a second position wherein first drive gears is in engagement with rack members, and second drive gears being mounted to a second movable housing that is movable between a first position wherein second drive gears are spaced from rack members to a second position

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wherein second drive gears are in engagement with rack members, and means to lock said first and second housing in second positions thereof.

Claims 8 & 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The cited prior art does not disclose hoist assemblies mounted to a transfer unit for controlling movement of a spreader beam, each hoist assembly including a pair of winding drums for controlling cables connected to a spreader frame, and at least one hoist motor drivingly connected to each hoist assembly.

Response to Arguments

Applicant's arguments with respect to claims 1-4, 7-9 & 12 have been considered but are moot in view of the new ground(s) of rejection.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). Both Toda and Nordstrom are analogous and properly combined for dealing with hoists that move suspended loads.

In response to applicant's argument that Toda's apparatus could not lift a shipping container, the fact that applicant has recognized a disadvantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). Claims 1-13 do not recite structure which would enable lifting larger weight or a particular container much less the weight of an international shipping container. And, "heavy" is a relative term where Toda's factory hoist is certainly called upon to lift substantial weights that are equivalent to a container.

Whether Schwartz is a land vehicle is irrelevant as Schwartz is analogous art for at least disclosing lifting and moving objects via a hoist and spreader bar.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., requiring more one ring rail to pass another ring rail in a different direction) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

With respect to claim 1 and guide members, it is noted that Nordstrom's guide members 106 between a spreader beam and transfer unit certainly guides a container from a lowered position to a raised position.

With respect to claim 12, in response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce

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the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Suerwein's power provision could utilize the feature of rocker 13 which can bridge between branches of intersecting rails.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

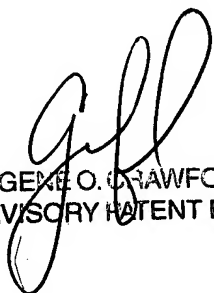
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory W. Adams whose telephone number is (571) 272-8101. The examiner can normally be reached on M-Th, 8:30am-5pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene O. Crawford can be reached on (571) 272-6911. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GWA


GENE O. CRAWFORD
SUPERVISORY PATENT EXAMINER